

AN-100U

RedMAX™ Base Station



Redline's RedMAX™ AN-100U is the world's first WiMAX Forum Certified™ base station. Easy and cost-effective to deploy, the RedMAX™ AN-100U facilitates rapid provisioning for fixed and nomadic wireless broadband access to information, wireless video surveillance, wireless data acquisition and wireless smart grid connectivity.

Its extremely low latency ensures reliable delivery of delay-sensitive services such as circuit switched voice, Voice-over-Internet Protocol (VoIP), video and prioritized data traffic. A full suite of Quality of Service (QoS) controls can be applied individually and "on-the-fly" to each subscriber according to their Service Level Agreement (SLA).

Available in 3.3 GHz – 3.5 GHz, 3.4 GHz – 3.6 GHz, and 3.6 GHz – 3.8 GHz bands, the RedMAX™ AN-100U can be deployed in clusters of up to six (60 degree) sectors to form high capacity, multi-sector cell sites. Its GPS time synchronization feature facilitates tight frequency reuse enabling more efficient spectrum and channels usage when operating Time Division Duplex (TDD) radios in close proximity.

The RedMAX™ AN-100U is fully field upgradeable by firmware download to accommodate updates and future enhancements. Over the Air (OTA) provisioning simplifies control, improves customer service and lowers cost. Its robust design is highly reliable and meets stringent carrier-class Network Equipment Building System (NEBS) Level 3 design requirements making it the perfect choice for mission critical deployments.

Easy and economical to deploy, high performance and fully featured, the RedMAX™ AN-100U base station is the ideal solution for any WiMAX access network.

Features:

- High performance PMP base station platform
- Operating in the 3.3–3.5; 3.4–3.6; and 3.6–3.8 GHz RF bands
- 2nd generation 802.16 MAC
- 3rd generation OFDM PHY
- Extremely low latency
- Superior reliability
- Dynamic QoS
- Advanced encryption using DES
- SNMP Manageable



AN-100U (RedMAX™ Base Station) System Specifications

System Capability:	LOS, Optical LOS, non LOS Cellular-based point-to-multipoint
RF Band:	3.3-3.5; 3.4-3.6; and 3.6-3.8 GHz
Channel Size:	3.5 MHz, 7 MHz
Spectral Efficiency:	Up to 5 bps/Hz (over the air)
Sector Capacity:	18 Mbps (7 MHz channel size); 9 Mbps (3.5 MHz channel size) user rates 37,400 packets per second (tested with 64 byte packets)
Latency:	6-18 msec (depends on channel size, OFDM frame duration)
Maximum Tx Power:	+23 dBm across all modulation/coding levels (region specific)
Rx Sensitivity:	Better than -98 dBm @ BPSK 1/2 (based on BER of 1x10e-6)
IF Cable:	Maximum length up to 984 ft (300 m) using Redline recommended high-grade IF cable
Network Attributes:	Transparent bridge 802.1Q, TOS/DSCP and L2/L3 address, traffic classification DHCP client, client pass-through
Modulation/Coding Rates:	Auto-select modulation: BPSK, QPSK, 16 QAM, 64 QAM Auto-select coding: 1/2, 2/3, 3/4
Over the Air Encryption:	DES, 3DES
Synchronization:	Input for external 1 PPS GPS clock signal
MAC:	802.16-2004 certified PMP 802.16-2004 packet convergence sub-layer mode TDMA Access
Range:	Up to 72 km (45 mi)
Duplex Technique:	TDD (time division duplex) HD-FDD (half duplex frequency division duplex)
Wireless Transmission (PHY):	256 FFT Orthogonal Frequency Division Multiplexing (OFDM) (Orthogonal Frequency Division Multiplexing)
Network Connections:	Standard: 10/100 Ethernet (RJ-45) – Data and Management Ports
System Configuration:	HTTP (Web) interface, SNMP CLI via Telnet and Local Console
Network Management:	SNMP, standard and proprietary MIBs Full management by Redline Management Suite (RMS)
Power Requirements:	Auto-sensing 110/220/240 VAC 50/60 Hz Auto-sensing 18-72 VDC, 80 W
Redundant Power:	Optional dual AC or dual DC power supply (dual cord) with automatic fail-over
Compliance:	EMC: EN 301 489-1, EN 301 489-4, EN 55022/CISPR 22 RF: EN 302 326, Industry Canada: RSS-192, FCC: Parts 90 & 15 (for USA 3.65 GHz operation) Safety: IEC 60950-1, UL 60950-1
Operating Temperature:	IDU: 0 C to 40 C ODU: -40 C to 60 C
Dimensions:	IDU: 17 x 12 x 1.75 in (431.8 x 304.8 x 44.45 mm); ODU: 13 x 5 x 2 in (330.2 x 127.0 x 50.8 mm)
Weight:	IDU: 5.5 lb (2.5 kg); ODU: 8.0 lb (3.6 kg)
Humidity:	Up to 90% non-condensing

About Redline Communications

Redline Communications is the leading provider of advanced broadband wireless solutions. Redline's award-winning broadband wireless products enable network operators to cost-effectively support high bandwidth communications, including voice, video, and data communications. Redline is committed to maintaining its wireless industry leadership with the continued development of advanced wireless broadband products. Redline's experience and expertise helps service providers, utilities, oil and gas, government, military organizations and more roll out wireless broadband networks to support their specific communications requirements.

